Purchasing Power and Related Services: A Window into Customer Preferences

End-users of electricity will soon be faced with opportunities to express their power purchase preferences in ways never before possible. Evidence from solicitations and negotiations to date indicates an interest in a diverse array of services.

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Across the country, states are moving rapidly to restructure markets for electricity and related services. At least two primary paths to restructuring have emerged: (1) the initiation of pilot programs designed to open a portion of the market to retail competition, and (2) the initiation of full retail competition on a future date certain. While a number of states have already introduced pilots, no states have actually commenced full retail competition. Three (California, New Hampshire and Massachusetts) are scheduled to do so within the next year.

Increased customer choice has already begun to have an impact on the suppliers of electricity services. There has been an increase in the number and type of suppliers and innovations in the pricing, rate of development, and variety of service bundles. The industry trade press and academic literature generally focuses on the "supply side" of the transformation of the electric utility industry (e.g., announcements of strategic alliances, new products and services), while there is much less information that is publicly available on actual consumer preferences. This phenomenon is due, in part, to the limited economic activity in restructured markets to date.

Nonetheless, in response to electricity restructuring, end-users are

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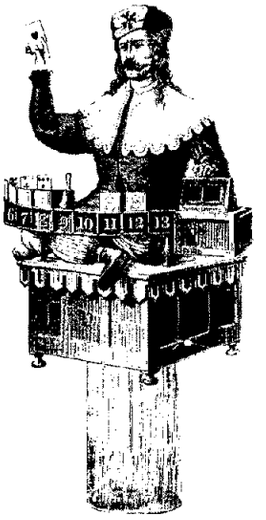
increasingly purchasing electricity and related services through new and emerging channels. For example, many firms are involved in direct negotiations with power marketers, energy services companies or other potential providers of electricity and related services, often as a result of supplier marketing efforts. Other firms are purchasing electricity and related services through the issuance of public and targeted solicitations.[1] These solicitations provide some important insights into large customers' preferences in electricity services, pricing forms, contract lengths, and so on.

I. Study Approach

We have examined a range of solicitations from large end-users in order to gain a more detailed understanding of consumer preferences for electricity-related services and to complement information available from survey results of customers participating in retail pilot programs.[2] We also reviewed these solicitations to develop some initial insights on whether actual customer preferences in the U.S. were consistent with either current "conventional wisdom" or international experience with restructured electricity markets (e.g., the United Kingdom, Norway) regarding the limited demand for value-added services, such as energy efficiency services.[3]

We obtained 20 solicitations for the purchase of electricity and related services. These solicitations offer a window into the preferences of commercial, industrial and government sector consumers of electricity. **Table 1** provides a summary of our sample, including information on (1) market sector and location of operations; (2) whether the solicitation was issued under a restructuring pilot program or in anticipation of full retail competition, (3) the type of solicitation (e.g., request for qualifications, request for proposals), and (4) the variety of services requested.

In order to obtain some solicitations, we agreed not to reveal the identity of firms. The organizations represented in our sample include state, federal and local government agencies, nonprofit organizations, and commercial and industrial sector businesses. About 25 percent of the solicitations in our sample were requests for supplier qualifications. The remaining three-quarters involved various types of requests for proposals. We supplemented our review through interviews with several end-users and consulting groups involved in the development of these solicitations.



Our findings should be interpreted with caution because of the small sample size and data limitations. Despite our offer of confidentiality, we were unable to obtain a number of solicitations that have been issued by private firms.[4] Moreover, solicitations represent only one of the available avenues for purchase of electricity-related services. As noted earlier, we have little information on contracts resulting from direct negotiations.

II. Who Is Issuing Solicitations?

Thus far, only large end-users with significant electric loads or entities that believe that they can successfully aggregate loads have issued solicitations. The transaction costs associated with competitive solicitations appear to limit the appeal or viability of this strategy for smaller customers. About 50 percent of the solicitations we reviewed were issued by various government agencies pursuing aggregation strategies. These include five municipalities that can provide a firm commitment for their own facility loads and are interested in aggregating loads of other local businesses and residences, a public university and state college system that is aggregating loads from individual campuses, and three local government associations that want to aggregate loads of member agencies. Informal discussions with representatives of various agencies suggest that key factors underlying their procurement strategy are: (1) established procurement protocols, (2) legal requirements and (3) expectations that large government purchases be conducted in open processes.

Three solicitations in our sample were issued by nonprofit trade organizations representing

multi-site commercial firms. These nonprofit organizations issued solicitations in part to help create demand for their aggregation services, because typically they did not have firm commitments from individual member firms. Historically, both governmental agencies and these nonprofit entities have performed various coordinating roles in their respective sectors and may be well positioned to serve as electricity demand aggregators in addition to their traditional functions. We were also able to obtain five solicitations issued by large industrial firms or national account customers.

We are aware of only a small number of solicitations issued by end-users in conjunction with retail competition pilot programs. This may suggest that end-users participating in retail competition pilots are less likely to use solicitations for electricity purchases compared to end-users in states initiating full-scale retail competition. Two factors could explain such a difference. First, the potential benefits of competitive solicitation may be less compelling in a pilot program because the range of suppliers is often limited to some prespecified list. End-users often use solicitations to screen out "fly-by-night" suppliers. Because the suppliers approved to participate in some pilot programs have been pre-qualified and approved, this feature of a solicitation may be of less value to end-users. Second, because there may be timing restrictions associated with pilot programs, consumers may need to begin considering offers before they would be able to issue a solicitation and receive bids, particularly for governmental agencies.

III. What *Do* Customers Want?

Our sample suggests five themes that shed light on the motives and service preferences of large end-users issuing solicitations. End-users in our sample exhibited:

Table 1: What the Customer Wants: Key Attributes of Selected RFPs and RFQs

Sector	State	Direct Access, Pilot, Other	Solicitation Type	Stages	Winner?	Energy	Ancillary Srvcs.	Billing Srvcs.	Metering Srvcs.	Finan. Srvcs.[2]	Green Power	Energy Efficiency Srvcs.	Infrastruc. Dev'l. & Maint.[3]	Tariff Analysis
G	CA	DA	RFQ/RFP	1	Y	x	x	x	x		x[1]			
G	CA	DA	RFP	1	Y	x	x	x	x					
I	NE[4]	O	RFP	1	Y	x								
C	CA	DA	RFP	1		x								
NP/C	CA	DA	RFP	1		x								
G	CA	DA	RFP	1		x	x	x	x		x[1]			
G	CA	DA	RFQ	2	Y	x		x	x				x	
G	CA	DA	RFQ	2		x			x			x		x
G	CA	DA	RFP	1		x		x	x	x		x		
G	CA	DA	RFQ	1	Y	x	x			x				
C	CA	DA	RFP	1		x		x						
G	NE	DA & P	RFP	1		x	x	x	x		x	x	x	
I	CA	DA	RFQ/RFP	3				x	x			x		x
I	FL	O	RFP	1	Y	x	x				x[1]		x	
I	MI	P	NA	?		x		x	x					
NP/C	MA	P	RFP	2	Y	x						x		
NP/C	MA	DA	RFP	2		x	x	x	x	x	x	x	x	
I	CA	DA	RFP	1										x
G	CA	DA	RFP	1			x	x	x			x	x	
G	CA	DA	RFQ/RFP	2		x	x	x	x	x		x	x	

Notes:
1. Optional
2. Financial services refer to a range of services including risk management, financing and provision of equity capital
3. Infrastructure development and maintenance refers to requests for both development of technical facilities, such as distribution networks, and O&M service for existing facilities
4. NE = New England.

1) A strong desire "to test the market," and in some cases, influence regulators;

2) A willingness to consider a wide variety of pricing forms and options, subject to certain constraints;

3) An interest in purchasing "green" power, at least among some governmental and commercial customers;

4) A strong interest in electricity-related services beyond the provision of the commodity, which we characterize as "commodity-plus," and

5) Some level of interest in energy efficiency services among certain large end-users.

A. Testing the Market (and Influencing Legislators and Regulators)

While some end-users in our sample were clearly interested in purchasing electricity-related services (as evidenced by the comprehensiveness of the solicitation), it appears that some solicitations were used as information-gathering tools by issuers seeking to "test the market." For example, in several solicitations, end-users provided only cursory information on the energy-related characteristics of their facilities or their service preferences. In some cases, this approach was part of a conscious, two-stage procurement strategy (e.g., a request for qualifications to select a small group of potential suppliers who would then be allowed to respond to an RFP which included comprehensive information on facility energy-related characteristics and loads). However, we also found a number of examples of solicitations which we would characterize as "give me a proposal, I'm not sure what I want."

As D. Louis Peoples, CEO of Orange and Rockland Utilities, Inc., noted, "a competitive marketplace requires a learning curve for customers and marketers."[5] Competitive solicitation processes can be a useful tool in helping end-users move up the learning curve and gather valuable information about the market. For example, one end-user that utilized a two-stage process (i.e., RFQ and RFP) added a set of specified ancillary services and non-firm power to the scope of services in the RFP which did not appear in their initial RFQ. Ancillary services include schedule coordination and provision of reserve margin and black-start capability. In California, despite requirements that ancillary services be provided with the purchase of electricity, fully two-thirds of the solicitations did not specifically request such services. It is likely that these entities were not completely aware of the market requirements at the time of issuance.

Interest in electricity pricing goes well beyond the claim that customers simply want to purchase power from the lowest-cost providers.

Some solicitations also appear to be intended, in part, to influence regulators or legislators. For example, Howard Foley, President of the Massachusetts High Technology Council, said of that group's solicitation, "We believe this program will provide our members with the ... benefits from ongoing, energy-related legislative activity." This interest in legislative activity was no doubt related to Massachusetts' pilot program approach to restructuring. We also discovered two solicitations issued by companies operating in states that do not currently allow direct retail access. Conversations with executives at one of these firms leads us to believe that their RFP was part of an attempt to substantiate a claim to wholesale status with FERC and thereby bypass the need for retail access regulation. In the second case, the apparent intent was to accelerate the process of restructuring in the company's home state.

B. A Variety of Pricing Options

Based on our sample, it appears that customers want suppliers to provide a broad array of pricing forms. Our analysis suggests that customers' interest in electricity pricing goes well beyond the claim that "customers want to purchase power from those providers whose cost structures, at any given moment, allow them to minimize their overall electricity bill."[6] For example, pricing forms requested by end-users included: (1) fixed price for energy only and/or demand charges plus energy; (2) prices indexed in some fashion to regional or na-

tional spot markets; (3) time-of-use (TOU) pricing based on either changes in hourly spot or peak vs. non-peak seasonal differentials; (4) contracts for differences; (5) commodity and value-added services priced separately; (6) prices benchmarked relative to current utility tariff; and, (7) other innovative approaches suggested by suppliers.

In our sample, end-users either explicitly or implicitly identified a need to satisfy at least these four objectives: (1) maximize total savings, (2) achieve the best possible rates, (3) minimize price risk and ensure price predictability, and (4) establish price comparability with other offers and with tariffed rates from the local utility.

These objectives are not entirely complementary, but neither are they entirely incompatible. For example, contract officers at several governmental agencies indicated that cost savings must be clearly demonstrable and often must be justified in terms that are easily comprehended by senior agency management. These agencies and their procurement staff tend to be risk-averse. For these end-users, prices that are benchmarked relative to the current utility tariffs may offer the most convincing comparisons, even if this pricing strategy does not maximize potential savings. By contrast, arrangements proposed by electricity suppliers may offer the potential for superior savings, although these suppliers may encounter difficulties if their proposals cannot be readily evaluated and compared to existing utility tariffs or involve complex analysis of financial risks. Thus, establishing price comparability may be of paramount importance for suppliers that want to do well in procurements issued by governmental agencies.

For other end-users, a predictable stream of future prices may be more important than finding the lowest possible price or maximizing total savings. For firms that are out to maximize savings and have attractive load shapes, some form of TOU pricing may represent the best alternative.

Most solicitations went well beyond the simple purchase of power and included services that historically have been part of bundled utility service.

C. Surprises on the Services Front

For the last 75 years, customers desiring electricity have been required to purchase "bundled" service from the local monopoly. The elements of services available have been largely defined by utilities and regulators. Certain customized services, such as demand-side management (DSM) and interruptible power, have become increasingly available, although supply of these services has typically been limited to the utility. However, prior to restructuring, the increasing potential for cogeneration, fuel substitution opportunities, and the development of DSM programs had already begun to alter the process of buying retail power for some large customers.[7]

Based on experiences in the U.K.—and possibly as an initial reaction to historically limited customer choice in the U.S.—we expected to find that large end-users would express strong preferences for "commodity only" service in their solicitations. However, to our surprise, only three solicitations specifically limited services to provision of the energy commodity only. About 65 percent of the solicitations went well beyond the simple purchase of commodity power and included some or all services that historically have been part of the bundle provided by electric utilities, such as ancillary services, billing, and metering (see Table 1). To some extent, interest in billing and metering services reflects explicit decisions of regulators in some states (e.g., California) to unbundle these services. However, the fact that industrial and commercial customers located in other states requested these services provides some evidence that there is real customer interest in innovation in these traditional utility-supplied services. National account customers, in particular, are clearly interested in taking advantage of technical advances in information and communication technologies to enhance billing services.[8]

We were also somewhat surprised by the relatively low number of requests for ancillary services, especially among firms in

California. We had expected to see ancillary services requested in nearly every case because of the requirements of the California Independent System Operator (ISO). The fact that ancillary services were not explicitly requested by end-users provides an example of the "learning curve" required of customers that want to participate in direct access and is possibly related to continuing regulatory uncertainties associated with new market structures in many states. Only one end-user specifically requested back-up power, which suggests that, at least in our sample, there was relatively low interest among large customers in securing additional service reliability beyond the level offered by the existing system.

About 60 percent of the solicitations included requests for at least one or more additional services such as tariff analysis, risk management, infrastructure development (e.g., economic development assistance or facility maintenance) and energy efficiency services. We would characterize these service packages as "commodity plus" in that customers are requesting value-added services that go well beyond basic electricity services. We were likewise surprised by the range and diversity of services requested. End-users identified over 20 distinct services, beyond the provision of commodity power, in these solicitations, which we combined into nine categories shown in Table 1.

D. Interest in Purchasing 'Green' Power

In our sample, about 25 percent of the end-users—mainly governmental agencies and nonprofit organizations representing commercial users—indicated that they were explicitly interested in supplier offers to provide "green" power. Overall, we found some large customers willing to consider supply packages that include "green power." Only one of five California municipalities included "green" power in their solicitations,

The level of interest in comprehensive energy efficiency services varied significantly among even customers that requested these services.

which was less than we expected given their stated interest in aggregating loads of residential customers. We would expect to see "green" power packages included more frequently in the future by municipalities seeking to target and aggregate residential customer loads. At least in California, public surcharge funds will be available to some customers that purchase "green" power from renewables. These financial incentives may help jump-start this market during the transition period and will encourage entry by retail energy suppliers interested in providing "green" power.

E. Demand for Energy Efficiency Services

About 40 percent of the end-users in our sample requested energy efficiency services of one type or another. Contrary to conventional wisdom, customer interest in energy efficiency services was not limited solely to the institutional governmental sector or large commercial customers, but also included one of the three industrial customers in our sample.

Based on our review, the level of sophistication or interest in comprehensive energy efficiency services varies significantly among even those customers that requested these services. For example, several end-users identified specific energy efficiency-related services, such as provision of end use load information, comprehensive energy audits, and installation of energy management systems and energy-efficient equipment, which suggests a high degree of familiarity and sophistication. Other end-users referred to demand side management services generically in their solicitations with little indication of what they had in mind.

This suggests to us that the demand for energy efficiency services is likely to undergo substantial evolution as the retail energy services market develops. Based on our small sample of solicitations, we would tend to agree that:

> (S)ome customers (sic) segments will value, and be willing to pay for, energy efficiency services in unregulated markets. However, these segments comprise only part of the current customer base. Others ... will not sustain energy efficiency investments in unregulated markets. We also find that

> the definition of energy efficiency is likely to broaden in unregulated markets .... (I)n unregulated energy services markets, customers will seek to satisfy a wider range of energy-related service needs .... To market energy efficiency successfully in such customer-driven markets, electricity retailers will likely have to bundle their offerings accordingly.[9]

This notion is echoed by others, who note that, "An important marketing consideration repeatedly expressed to us by commercial customers is that they do not necessarily value energy efficiency. ... In other works (sic), energy efficiency is, in itself, not thought of as a product or a service but a means to an end."[10] These comments suggest that demand for energy efficiency services may need to be stimulated by effective marketing efforts, given the limited customer interest.

Based on interviews, we also found that some customers appear concerned about possible conflicts of interest that may arise in purchasing both energy and energy efficiency services from the same supplier.[11] In other cases, internal purchasing procedures for electricity and energy efficiency differ significantly enough that a single solicitation cannot be used for both services.

IV. Conclusion

As the new industry structure emerges and matures, end-users of electricity will be faced with opportunities to express their preferences in ways that have not been possible previously. In anticipation of these changes, some of these customers have begun issuing solicitations for the purchase of electricity and related services on the open market. Our research suggests that, while many large customers are still learning, they are already exhibiting an interest in a diverse array of services. ■

Endnotes:

1. Competitive solicitations include both Requests for Proposals (RFPs) and Requests for Qualifications and are explicitly focused on the purchase of electricity and related services. Because some of the solicitations included were issued on a confidential basis, we maintain anonymity except in cases where the solicitation was issued on a public basis and disclosure of the specific organization will not jeopardize the anonymity of other organizations.

Some customers worry about possible conflicts of interest that may arise if they buy both energy and energy efficiency services from the same supplier.

2. J.H. Landon and E. P. Kahn, *Retail Access Programs: Where's the Beef,* ELEC. J., Dec. 1996; Univ. of New Hampshire Survey Center, Survey Report of Retail Competition Pilot Program (Jan. 31, 1997) (prepared for New Hampshire Public Utilities Commission); S. Rothstein, The Massachusetts Electric Choice New England: A Focus on Green Options (1997) (prepared by Environmental Futures, Inc. for Natl. Renewable Energy Laboratory); D. Nathan and E. Stipnieks, *Electric Retail Access Pilot Programs: The First Six* in PROCEEDINGS OF 18TH ANNUAL NORTH AMERICAN CONFERENCE OF INTERNATIONAL ASSOCIATION FOR ENERGY ECONOMICS (Sept. 1997); C. Noll, Lessons from Retail Wheeling Pilots: Power Value (Xenergy, 1996).

3. We believe that there remain legitimate social concerns about the efficiency of energy consumption in the economy, and it is, therefore, important to understand the level of interest in efficiency services outside the context of DSM in order to better assess the need for continued public policies.

4. Unfortunately, we were unable to obtain about 15-20 additional solicitations that we are aware of as a result of information in the trade press or discussions with industry consultants.

5. 4th Annual Energy Daily Competition Conference (1997).

6. S. Awerbuch, *Metering for the Virtual Utility—An Agenda,* UTIL. AUTOMATION Sept./Oct. 1997, at 26.

7. Over the last decade, large end-users have been confronted increasingly with questions related to product mix and supplier selection (e.g., for cogeneration, natural gas, or efficiency services).

8. B. Roth, *Defining the Customer's Buying Parameters,* ELEC. J., Mar. 1997.

9. W.R. Prindle, *Can Efficiency Keep the Rustlers Out? Energy Efficiency as a Customer Retention Tool,* ACEEE SUMMER STUDY ON ENERGY EFFICIENCY IN BUILDINGS 7.136-7.137 (1996).

10. N. P. Hall and J. H. Reed, *Marketing Energy Efficiency As a Consumer Commodity,* ACEEE SUMMER STUDY ON ENERGY EFFICIENCY IN BUILDINGS 5.61 (1996).

11. These findings from our interviews are consistent with information quoting an energy manager at AT&T, Ray Saleeby, as stating, "After a while, large customers are going to say that they can't have the person who is doing their energy services also being the one who is supplying them with energy. They will need someone who is free, clear, and objective, who can shop around intelligently for energy. ... With a utility whose agenda is selling energy, its ESCO has to be suspect." *See* J. McCaughey, *Battle of the ESCOs,* ENERGY ECON., July 1997, at 6.